

Notice of Allowability

Application No.

10/807,627

Examiner

John H Le

Applicant(s)

SCHWEIKERT ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/24/2004 (Preliminary Amendment).
2. ☒ The allowed claim(s) is/are 14-19.
3. ☒ The drawings filed on 24 March 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The applicant has been amended as follows:

In the Specification:

Page 1, line 1, "This application is a Divisional Application of co-pending Patent Application No. 10/338,513 filed January 8, 2003 now U.S. Patent No. _____." Has been changed to --This application is a Divisional Application of co-pending Patent Application No. 10/338,513 filed January 8, 2003 now U.S. Patent No. 6,799,132.--.

Reasons for Allowance

2. Claims 14-19 are allowed.
3. The following is an examiner's statement of reasons for allowance:

In combination with other limitations of the claims, the cited prior arts fails to teach steps of: applying a release pulse of one of a first predetermined duration of a selected one of said plurality of release times and applying a hold pulse of a second predetermined duration corresponding to said selected one of said plurality of release times to a valve controlling pressure to a brake cylinder initially having a minimum first predetermined pressure; measuring an elapsed time that said brake cylinder changes from a second predetermined pressure to a third predetermined pressure; increasing said first predetermined duration and decreasing said second predetermined duration if said elapsed time is greater than a first predetermined time, and decreasing said first

predetermined duration and increasing said second predetermined duration if said elapsed time is less than a second predetermined time, as recited in claim(s) 14.

In combination with other limitations of the claims, the cited prior arts fails to teach steps of: applying an application pulse of a first predetermined duration of a selected one of said plurality of application times and applying a hold pulse of a second predetermined duration corresponding to said selected one of said plurality of application times to a valve controlling pressure to a brake cylinder initially having a maximum first predetermined pressure; measuring an elapsed time that said brake cylinder changes from a second predetermined pressure to a third predetermined pressure; increasing said first predetermined duration and decreasing said second predetermined duration if said elapsed time is greater than a first predetermined time, and decreasing said first predetermined duration and increasing said second predetermined duration if said elapsed time is less than a second predetermined time, as recited in claim(s) 17.

U.S. Patent No. 4,748,564 discloses an anti-skid brake control system omits certain control steps, which are normally executed periodically in order to achieve rapid fluid pressure build-up in the wheel cylinders. The system also allows holding of the braking pressure at a high constant level at the initial stage of braking pressure to ensure optimal braking characteristics on slippery road surfaces. Upon initiation of a brake pressure APPLICATION mode, a HOLD mode is enabled for a given period following which the HOLD mode is disabled. '564 fails to specify steps of applying a release pulse of one of a first predetermined duration of a selected one of said plurality

of release times and applying a hold pulse of a second predetermined duration corresponding to said selected one of said plurality of release times to a valve controlling pressure to a brake cylinder initially having a minimum first predetermined pressure; measuring an elapsed time that said brake cylinder changes from a second predetermined pressure to a third predetermined pressure; increasing said first predetermined duration and decreasing said second predetermined duration if said elapsed time is greater than a first predetermined time, and decreasing said first predetermined duration and increasing said second predetermined duration if said elapsed time is less than a second predetermined time, as now recited in claim 14 of the present invention. '564 also fails to specify steps of applying an application pulse of a first predetermined duration of a selected one of said plurality of application times and applying a hold pulse of a second predetermined duration corresponding to said selected one of said plurality of application times to a valve controlling pressure to a brake cylinder initially having a maximum first predetermined pressure; measuring an elapsed time that said brake cylinder changes from a second predetermined pressure to a third predetermined pressure; increasing said first predetermined duration and decreasing said second predetermined duration if said elapsed time is greater than a first predetermined time, and decreasing said first predetermined duration and increasing said second predetermined duration if said elapsed time is less than a second predetermined time, as now recited in claim 17 of the present invention.

U.S. Patent No. 4,704,684 discloses an anti-skid control system in which a sampling mode, which determines the size of pulse groups of which the durations are to

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be measured, is changed when the pulse group duration is shorter than is optimal for the control system. '684 fails to specify steps of applying a release pulse of one of a first predetermined duration of a selected one of said plurality of release times and applying a hold pulse of a second predetermined duration corresponding to said selected one of said plurality of release times to a valve controlling pressure to a brake cylinder initially having a minimum first predetermined pressure; measuring an elapsed time that said brake cylinder changes from a second predetermined pressure to a third predetermined pressure; increasing said first predetermined duration and decreasing said second predetermined duration if said elapsed time is greater than a first predetermined time, and decreasing said first predetermined duration and increasing said second predetermined duration if said elapsed time is less than a second predetermined time, as now recited in claim 14 of the present invention. '684 also fails to specify steps of applying an application pulse of a first predetermined duration of a selected one of said plurality of application times and applying a hold pulse of a second predetermined duration corresponding to said selected one of said plurality of application times to a valve controlling pressure to a brake cylinder initially having a maximum first predetermined pressure; measuring an elapsed time that said brake cylinder changes from a second predetermined pressure to a third predetermined pressure; increasing said first predetermined duration and decreasing said second predetermined duration if said elapsed time is greater than a first predetermined time, and decreasing said first predetermined duration and increasing said second predetermined duration if said

elapsed time is less than a second predetermined time, as now recited in claim 17 of the present invention.

U.S. Patent No. 4,674,049 discloses an anti-skid brake control system for an automotive vehicle has a control module comprising one or more microcomputers. The microcomputer is connected to a wheel speed sensor, which supplies a sensor signal indicative of the wheel speed, and a timer, which outputs a timer signal indicative of the elapsed time. The microcomputer has an input time data-sampling program for latching the timer signal value and storing the latched timer signal value as input time data for the corresponding sensor signal pulse. The input time data sampling program is executed as an interrupt program independent of a main program which processes the input time data and controls application and release of hydraulic braking pressure to a vehicle wheel in such a manner that wheel speed is adjusted toward an optimum relationship with vehicle speed. '049 fails to specify steps of applying a release pulse of one of a first predetermined duration of a selected one of said plurality of release times and applying a hold pulse of a second predetermined duration corresponding to said selected one of said plurality of release times to a valve controlling pressure to a brake cylinder initially having a minimum first predetermined pressure; measuring an elapsed time that said brake cylinder changes from a second predetermined pressure to a third predetermined pressure; increasing said first predetermined duration and decreasing said second predetermined duration if said elapsed time is greater than a first predetermined time, and decreasing said first predetermined duration and increasing said second predetermined duration if said elapsed time is less than a second

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predetermined time, as now recited in claim 14 of the present invention. '049 also fails to specify steps of applying an application pulse of a first predetermined duration of a selected one of said plurality of application times and applying a hold pulse of a second predetermined duration corresponding to said selected one of said plurality of application times to a valve controlling pressure to a brake cylinder initially having a maximum first predetermined pressure; measuring an elapsed time that said brake cylinder changes from a second predetermined pressure to a third predetermined pressure; increasing said first predetermined duration and decreasing said second predetermined duration if said elapsed time is greater than a first predetermined time, and decreasing said first predetermined duration and increasing said second predetermined duration if said elapsed time is less than a second predetermined time, as now recited in claim 17 of the present invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H. Le whose telephone number is 571-272-2275. The examiner can normally be reached on 7:00 - 3:30.

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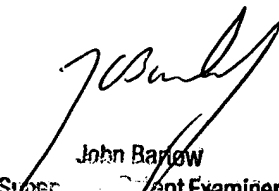
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John H. Le

Patent Examiner-Group 2863

January 4, 2005


John Barlow
Superintendent Examiner
Center 2800